

AMENDMENTS TO THE CLAIMS

The following is a complete, marked-up listing of revised claims with a status identifier in parenthesis, underlined text indicating insertions, and strike through and/or double-bracketed text indicating deletions.

LISTING OF CLAIMS

1-12. (Canceled)

13. (Currently Amended) ~~Generation and application~~ A method of generating and applying on a support of a digital spatial marking of ~~X times y~~ X x Y points according to a resolution of d1x by d1y points per surface unit and intended to be read by a reading device with a resolution of d2x by d2y points per surface unit, taking into account that the ratio d1x/d2x and/or d1y/d2y is larger than 1, ~~this process~~ the method comprising the following steps:

- defining a pseudo-random digital mark in a resolution d2x by d2y,
- ~~sub-sampling of~~ over-sampling the digital spatial marking in X according to a factor $n_x = d1x/d2x$ and in Y according to a factor $n_y = d1y/d2y$ in order to obtain a digital mark according to a resolution d1x by d1y,
- ~~erosion of~~ eroding the points intended to be applied so as to ~~leave one point every nx points in X and one point every nx points in Y,~~ guarantee that the minimum distance between them is respectively nx and ny in horizontal and vertical directions, and
- ~~application of~~ applying the spatial marking on the support.

14. (Currently Amended) ~~Generation and application method of a~~ The method of generating and

applying the spatial marking according to claim 13, wherein the resolution of the reading device is identical in X and in Y ~~that is to say~~ ($d2x=d2y$).

15. (Currently Amended) ~~Generation and application method of a~~ The method of generating and applying the spatial marking according to claim 13, wherein the resolution of the initial spatial marking is identical in X and in Y ~~that is to say~~ ($d1x=d1y$).

16. (Currently Amended) ~~Generation and application method of a~~ The method of generating and applying the spatial marking according to claim 13, wherein the ratio of resolution in X (n_x) and the ratio of resolution in Y (n_y) is comprised between 2 and 5, 2 and 5 inclusive.

17. (Currently Amended) ~~Generation and application method of a~~ The method of generating and applying the spatial marking according to claim 13, wherein the support is constituted by a printing process.

18. (Currently Amended) ~~Generation and application method of a~~ The method of generating and applying the spatial marking according to claim 13, wherein the support is constituted by an engraving process.

19. (Currently Amended) ~~Method~~ A method of ~~recognition of a~~ recognizing the spatial marking applied according to the generation method of claim 13, ~~wherein it includes the following steps~~ comprising:

- ~~digital acquisition of an~~ acquiring a digital image of the support,

- filtering ~~on~~ the obtained image ~~obtained~~ to eliminate the parts not ~~comprising~~ including the spatial marking,
- ~~use of~~ using autocorrelation properties to compensate every affine transformation introduced by the acquisition,
- ~~compensation~~ compensating in translation of the spatial marking using an intercorrelation between the obtained spatial marking and the group of possible positions of the spatial marking defined by a key, and
- decoding ~~[[of]]~~ the digital information by statistical correlation for each bit of information.

20. (Currently Amended) ~~Detection~~ A method of detecting a spatial marking according to claim 19, wherein the filtering stage is based on a compensation of a uniform initial ~~colour~~ color.

21. (Currently Amended) ~~Detection~~ A method of detecting a spatial marking according to claim 19, wherein the filtering stage is based on a prediction of the image of the initial support by a soundproofing filter.

22. (Currently Amended) ~~Detection~~ A method of detecting a spatial marking according to claim 19, wherein the digital acquisition of the image is carried out by a scanner.

23. (Currently Amended) ~~Detection~~ A method of detecting a spatial marking according to claim 19, wherein the digital acquisition of the image is carried out using a portable detector.

24. (Currently Amended) ~~Detection~~ A method of detecting a spatial marking according to claim 19, wherein the acquisition and processing of the spatial marking are carried out in two geographically remote locations.

<End of Claims Listing>